

so dense at the end of the eclipse as to entirely conceal the reappearance of 4099, which was unfortunate. At the time of the greatest eclipse I estimated that only one-twentieth of the diameter of the Moon was uncovered, giving a magnitude of eclipse 0.950, closely agreeing with the *Nautical Almanac* 0.953. The eclipsed Moon at greatest obscuration appeared to have a bluish-grey tinge near the border of the shadow, and this tint gradually changed and finally became of a warm orange-grey tinge at the region furthest from the uneclipsed part of the Moon. There was a singular appearance within the shadow of bright curved wedge-like parts, with their bases on the east and west ends of the shadow's boundary, and with their points on the Moon's limits quite  $40^\circ$  from the illuminated part. The eastern wedge was the brighter of the two, but their magnitudes were the same. The existence of these wedges was manifest to the unaided eye, and to it the colour of the shadow at greatest obscuration was dark copper, it having been a few minutes previously bright copper. Two or three lunar peaks were visible near the S.W. point of Moon's limb, the loftiest projection a little S. of S.W.; there was a solitary, rather smaller, projecting peak near the S.E. point of the Moon's limb. During the progress of the eclipse the penumbra gave a pale straw colour to the lunar surface covered by it. The position of the observatory is  $3^m\ 0^s$  E., and  $51^\circ\ 20'$  N. approximately.

*Murston Rectory, Sittingbourne:*  
1892 May 23.

*Occultation of 73 Piscium by Jupiter, 1892 May 23, observed at  
the Royal Observatory, Greenwich.*

*(Communicated by the Astronomer-Royal.)*

Notice was called to this phenomenon by Mr. Marth in the April number of the *Monthly Notices*, and as the morning was fine, an attempt was made to observe it with the 10-inch guiding telescope of the photographic equatorial. Owing to the low altitude of *Jupiter*, its limb was boiling violently, and accurate observation was only possible at occasional brief intervals of good definition.

The following notes describe what was seen at these moments:—

Phenomenon Observed.	Observer.	Sidereal Time.	Mean Time.
Disappearance.		h m s	d h m s
Star almost in contact with limb	A. C.	19 25 49	23 15 17 4
Star apparently bisected	„	19 27 20	18 35
No trace seen of star	„	19 32 44	23 58
Reappearance.			
Star suspected for a moment	„	19 41 11	32 24
Star certainly reappeared	„	19 46 7	37 19

June 1892.

of 73 *Piscium* by *Jupiter*.

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It is probable that the time marked "Star suspected" is approximately correct for the reappearance, but the boiling of the limb made it impossible to verify it with certainty for some minutes more.

Mr. Marth's paper gave the Greenwich mean time of mid-occultation as  $15^h 36^m.6$ , and the duration as  $17^m.2$ . So far as the above rough observations are to be trusted, they seem to show that the Greenwich mean time of mid-occultation was  $15^h 25^m.6$ , and the duration  $12^m.8$ , or thereabouts.

The Greenwich observations of *Jupiter* at the end of 1891 gave as the error of Tabular R.A.  $-0^s.18$ , the error of Tabular N.P.D. being about  $-0''.1$ .

The apparent place of the star according to the Greenwich Ten-Year Catalogue, 1880, was R.A.  $0^h 59^m 16^s.297$ ; N.P.D.  $84^\circ 55' 23''.15$ . The Glasgow Catalogue gives the R.A.  $0^s.12$  greater, the N.P.D.  $1''.74$  smaller.

The initials are those of Mr. Crommelin.

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*Erratum in Monthly Notices, May 1892, p. 517.*

	$^{\circ}$		$^h$	$^m$	$^s$		$^s$
B.D.—19	4091	Dis.: for Sidereal Time	13	37	8.0	read	8.2
		for Mean Time	10	16	31.1	read	31.3

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